

1995 Annual Report

**State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
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Permittee - Genwal Resources, Inc.

Mine Name - Crandall Canyon Mine

Mailing Address - P.O. Box 1420, Huntington, Utah 84528

Company Representative - Randolph B. Gainer, P.G.

Resident Agent - Randolph B. Gainer, P.G.

Permit Number - ACT/015/032

MSHA ID Number - 47-01715

Date of Initial Permanent Program Permit - 02/27/88

Date of Permit Renewal - 5/13/1998

Quantity of Coal Mined 1995 - 2,079,884 tons (Crandall Canyon #1 Mine Production 1995)

A. GENERAL

Genwal Coal Company underwent a name change when Andalex Resources purchased NEICO's ½ share of Genwal. After January 1995, Genwal became Genwal Resources, Inc. The purchase, name change, etc. was approved by DOGM and included in the MRP as a permit modification. Thus, Andalex Resources and IPA are joint owners of the Crandall Canyon Mine.

Genwal submitted a minor amendment for expansion of a surface warehouse. The modification was approved by DOGM but has not yet been constructed by Genwal. Genwal also submitted a minor amendment in June 1995 which correctly designated the reclassification of the upper portions of Crandall Creek as intermittent. Thus, allowing the placement of longwall panels under the intermittent portions of the stream on both US Forest Service and State Lands. This amendment was denied because the USFS felt the stream was still perennial (again the USFS used different definitions than outlined in the CFR for determination of perennial streams). Genwal

changed the plate and resubmitted the amendment to provide for placement of longwall panels under the intermittent portions of the stream within the State Lands lease area. As of the end of December 1995 this minor amendment had not been approved.

In January 1995 Genwal submitted an amendment to the MRP to change from room and pillar retreat mining methods to longwall retreat mining methods. This modification was approved in May 1995 and longwall operations in the Crandall Canyon Mine began in June 1995.

In October 1995 Genwal submitted a major amendment which, if approved, would allow for the construction of a larger surface facility at the Crandall Canyon Mine. This amendment would allow the placement of a 72" diameter pipe in Crandall Creek and constructing 3 pads which would add approximately 4.7 additional acres of utilizable space to the surface facilities. The DOGM staff is diligently working on the review of this major amendment.

Genwal updated their Air Quality Permit from an annual production rate of 1.5 to 2.5 million tons of coal per year. Final approval was given and the new permit received on January 16, 1996. A copy of the approval letter is included within this annual report. The Division of Air Quality Approval Number assigned to Genwal and the Crandall Canyon Mine is DAQE-044-96.

Genwal also renewed their UPDES permit. Genwal received approval for Permit UT0024368 on August 7, 1995. With the new permit, Genwal is required to take monthly grab samples of the mine discharge water and the sediment pond discharge. The old permit required quarterly samples. The permit allows Genwal to have two (2) discharge points; outfall 001 (from the sediment pond) and outfall 002 (mine discharge directly to Crandall Creek). Reports for the 1st nine months were filed quarterly and during the last 3 months the reports were filed monthly. DOGM has received a copy of all these reports in Genwals Quarterly Reports.

A late spring-early summer series of snowfall events greatly delayed the collection of water quality monitoring data because a vast area was inaccessible. Also, as a result of the late snows and the large volume of snow, snowmelt runoff continued through June and July.

The area was also subjected to several large thunderstorm events in August. At least two 100-year storm events were recorded in the general area of the Wasatch Plateau within two weeks of each other. The area was then subjected to a very dry fall with few storm events.

B. WATER MONITORING DATA:

Groundwater Summary

1. Mine Discharge

Prior to August 1995 Genwal only discharged mine water on an infrequent basis (approximately 5 times since 1988). However, with installation of the longwall Genwal has received additional inflows in the gob behind the longwall. In both the 1st and 2nd longwall panels a significant roll in the floor was encountered which trapped any mine inflow and water used during the mining process. In addition, during August when the area was subjected to the intense summer thunderstorms, Genwal pumped the sediment pond water into the mine to ensure that flow did not occur either through the principal or emergency spillway. This practice ensures that only "clean" discharge water enters Crandall Creek (even during "upset" conditions).

Thus, in the late fall of 1995 Genwal discharged approximately 135 g.p.m. for a 2-3 day period in both October and November. No discharge occurred in December. Genwal does anticipate the need to continue using the mine discharge line on an infrequent basis over the life of the mine.

Trends

In the past Genwal has frequently pumped (approximately 75 g.p.m.) from Crandall Creek for inmine use. Since the longwall was installed, Genwal has decreased the amount of water being pumped from Crandall Creek and utilized the mine inflow. It is important to note that it appears that the same amount of mine inflows are occurring now as have always occurred. However, because the longwall advances faster than the retreat mining associated with room and pillar mining, more water is instantaneously available. The same inmine trends continue to occur: they are that when a perched water unit is encountered, flow occurs for a few days from an area and then the flow ceases from that area. After the longwall mines through an area, flow from that area greatly diminishes and then stops.

Data associated with water quality monitoring do not indicate that the Crandall Canyon Mine is negatively affecting the water quality of either Crandall Creek or Huntington Creek. Prior to discharge Genwal ensures that all inmine waters are placed in our underground sumps to allow any suspended materials the time required to settle within the sump.

Over the past few years the water level in MW-5 has been declining. In fact, for the first three quarters of 1995 Genwal personnel were not able to get an adequate sample to characterize the water as only mud or muddy water (far beyond turbid) was retrieved. However, during the last quarter of 1995 the water level increased approximately 5 feet in MW-5. The increase in water level is attributed to the additional precipitation which the area had received over the previous 9 months. The water level in MW-2 also showed a slight increase.

2. Springs

Water quality data indicate that no significant changes are occurring to the water chemistry. The Wasatch Plateau area was the beneficiary of a series of late spring-early summer snowfall and rain events which greatly supplemented the water supply. Genwal personnel did observe a slight increase in the spring flows which continued until late summer-early fall. This is a change in trend since for the past 7-8 years the spring flow has been declining due to drought conditions.

3. Surface Water

Surface water flows continue to parallel the precipitation events. No substantial changes have been observed in either quantity or quality. No effect of the presence of the Crandall Canyon mine have been observed in the water quality. Obviously when the mine is either pumping from or discharging into Crandall Creek the stream flow will fluctuate. However, these fluctuations are not substantial and have not negatively influenced either the flora or fauna.

Annual subsidence monitoring and observations made during the quarterly water quality monitoring have not indicated that any tributaries have been negatively affected by subsidence. The subsidence study being conducted in conjunction with the US Forest Service in Blind Canyon has not detected any subsidence under the Blind Canyon watershed or stream channel.

C. SUMMARIZED WATER MONITORING DATA

1. The list of Monitoring Points is provided below. Their locations can be found on plate 7-12 in the MRP. The surface water, the springs and the groundwater are sampled on a quarterly basis. As listed in the approved PAP they are:

Surface Water	Springs	Groundwater
Upper Crandall	SP-30	MW-1
Lower Crandall	SP-36	MW-2
Blind Canyon	SP-58	MW-4
Horse Canyon	SP2-24	MW-5
Upper Joes Valley	SP2-9	
UPDES-001	SP-47A	
UPDES-002	SP1-3	
	SP1-19	
	SP1-22	
	SP1-33	
	SP1-47	
	SP2-1	
	SP1-9	
	SP1-24	

2. UPDES Permit

Permit No. UT0024368 issued to Genwal Resources, Inc for two (2) discharge points:

A. Outfall 001 - a 6-inch discharge pipe on the north side of the settlement pond. Located at latitude 39° 27' 38" and longitude 111° 09' 59"

B. Outfall 002 - a 4-inch discharge pipe on the south side of the settlement pond. Located at latitude 39° 27' 38" and longitude 111° 09' 59"

Discharge did occur from the 4-inch line, which is the mine discharge line. Initially, prior to any discharge a sample of the sump water was collected for analyses. Then a sample was collected during the discharge events. Water quality samples indicate that the water complies with both state and federal standards and no discharge parameters were exceeded during discharge events.

D. PRECIPITATION DATA

Precipitation data are collected at the mine on a daily basis after or during each storm event. The data are enclosed within this report in tabular form.

E. SUBSIDENCE MONITORING REPORT

A review of the subsidence map and accompanying data did not reveal the presence of any distinguishable subsidence having occurred on or contiguous to the Genwal Permit area.

In mid-summer each of the monitoring stations is "re-established" for horizontal and vertical location. The station is then identified by placing large "aerial panels" across the subsidence station. In the early fall (October) the aerial survey is conducted and the data submitted to Genwal after being assessed by the Aerial Photographic Company. No significant changes were noted at either the monitoring stations or from the aerial survey data.

No man-made structures are located on the surface above the Crandall Canyon Mine. The mine itself is located within the Manti-LaSal National Forest and on 2 sections of land belonging to the State of Utah. Each landowner has a current copy of Genwal's MRP and each landowner has received a minimum of two separate (and updated) mining sequence maps during 1995. As mining progresses at the Crandall Canyon Mine and mining layouts or sequence maps are changed then each respective landowner will be notified.

Each area mined in 1995 and projected to be mined in 1996 is monitored with the current subsidence monitoring program. In addition, Genwal has agreed to not subside any area outside of their permit boundary.

F. VEGETATION DATA (TEST PLOTS) OR REVEGETATION SUCCESS MONITORING

Genwal was not required to conduct vegetation monitoring during 1995. However, vegetation monitoring is scheduled to be conducted in the last half of the growing season of 1996.

It is important to note that Genwal personnel do inspect and note the success of the revegetation efforts during each of the growing seasons. The areas of the Crandall Canyon Mine which were disturbed and have been reseeded have been very successful in not only re-establishing vegetation, but also in the amount of productivity achieved. Very positive remarks have been made by DOGM personnel on the successful revegetation achieved on each of the three topsoil stockpiles and other previously disturbed areas.

G. ANNUAL IMPOUNDMENT CERTIFICATION

Genwals sediment pond is inspected on an annual basis by a certified professional engineer and on a quarterly basis by a qualified person for appearance of structural weakness and other hazards. The depth and elevation of the impounded water are noted and a determination is made for the existing storage capacity of the impoundment.

As approved by Genwals DOGM inspector, Genwal cleaned the sediment pond in July 1995 to regain the original storage capacity of the impoundment. Prior to cleaning the pond, representative sediment samples were submitted to an approved laboratory to determine if the materials exhibited any toxic or hazardous characteristics. The laboratory data indicated that the sediment was not toxic or hazardous, and in fact contained a large percentage of coal fines. The sediment had sufficient coal fines and coal particles to allow for the material to be mixed with Genwals coal and sold. Genwal would not have been able to sell the coal-sediment materials if significant soil erosion was occurring on the mine site.